

REMARKS

The office action again objects to Figures 13-31, stating that the drawings are “inadequate, because the Examiner cannot determine what is illustrated...drawings are required to show the invention adequately”. Applicant does not understand the precise objection to the drawing based on this statement. In other words, if the drawings are believed to be “inadequate” because the Examiner is unable visually to determine what is shown, Applicant proposes supplying a larger photograph copy in place of one or more of the photographs provided to the Examiner.

If, instead, the Examiner is asserting that Figures 13-31 do not show the invention itself, Applicant responds that the photographs submitted clearly show a method to fabricate the unitary structural member or members defined in the pending claims, examples of which are shown in Figures 1-12. The photographs in Figures 13-31 are submitted in accordance with 37 CFR 1.81(b), for example, which states that drawings “may include illustrations which facilitate an understanding of the invention”. Furthermore, Applicant respectfully submits that the unitary structural members may be developed by a special process developed by Applicant, and that the photographs in Figures 13-31 are believed to be the best way to show the steps taken in a preferred process. The use of photographs is believed to be appropriate in this case because, as provided in 37 CFR 1.84 (b) (1), if photographs are the only practicable medium for illustrating the claimed invention, photographs are permitted in utility patent applications.

If, on the other hand, the objection is that the nature of the figures is not clear, Applicant refers to the present specification. For example, page 27, lines 10-12 refer to images of pattern component computer models shown in Figures 12 and 13, and screen captures shown in Figure 14. These patterns are part of a preferred process for making the unitary structural member. Applicant accordingly submits that photographs showing the computer models and the digitally assembled patterns would be the only adequate way to show this stage of the process, as normal, inked drawings are not believed to be adequate to show these steps. In fact, Applicant believes that no draftsman is capable of rendering an image that is true to the computer models and digitally assembled patterns shown.

Applicant submits that the prepared formal drawings clearly depict the invention as claimed, and support all of the elements in the pending claims. The photographs provided illustrate steps in a preferred process for making the unitary structural member. Thus, Applicant respectfully submits that the photographs in Figures 13-31 meet the standards provided in 37 CFR 1.81 and 37 CFR 1.84, as well as MPEP § 608.02. If the office action is referring to a different reason for objection to the drawings, clarification of the objection is respectfully requested.

The Examiner has allowed claims 14-20 and 26-31. Applicant acknowledges and appreciates this statement. The Examiner also has indicated that claims 3, 9, 22, 23, and 25 would be allowable if rewritten in independent form. Claim 1 has been amended to include at least the features of allowable claim 3, now cancelled, and Applicant submits that amended claim 1 and dependent claims 2 and 4-13 are now allowable. Applicant further

submits new claim 32, which includes at least the features of allowable claim 9, and submits that claim 32 and dependent claims 33-35 are allowable. Also, Applicant has amended claim 21 to include at least the features of allowable claim 22, now cancelled, and submits that amended claim 21 and dependent claims 23-25 are allowable.

The remaining pending claims are new claims 36-45. Claim 36 defines a unitary structural member including, among other things, web portions having a curvilinear radial trajectory. Applicant believes that these claims are allowable for at least the following reasons.

The office action in rejecting original claim 10 (defining a central portion and web portions having a curvilinear radial trajectory) cites the central portion of portion 2b and ribs 11 from Kasuga as being curvilinear. However, new claim 36 defines, among other things, web portions having a curvilinear radial trajectory. As clearly shown in Figures 2 and 3, and as described in col. 3, lines 44-46 of Kasuga, the ribs 11 are straight and diagonal, and are not curvilinear. This is made clear by a comparison of ribs 11 of Kasuga with the structural members shown in, for example, Figures 5C and 6D of the present application. Furthermore, if the “central portion” of piece 2b was to be considered, only for the sake of argument, a curvilinear “web portion”, then piece 2b would lack a central portion as also defined in claim 36. Accordingly, Applicant respectfully requests allowance of new claim 36 and its dependent claims 37-38.

New claim 39 defines, among other things, a unitary structural member including a central portion of the unitary structural member having a curvilinear trajectory

along its length. Applicant respectfully submits that new claim 39 is believed to be allowable for at least the reason that Kasuga does not appear to teach or suggest a unitary structural member as defined.

As stated on page 10, lines 9-11 of the present specification, the term “unitary” as defined is intended to mean that the unitary structural member is formed in a single, integral piece; that is, the unitary structural member is not fabricated of separate sections, though individual unitary structural members can themselves be separate sections of a larger, structure.

Though the office action states that the central portion of bent portion 2b is curvilinear, Kasuga does not teach or suggest that either frame member portion 2a or 2b is unitary as the term is defined above. This lack of teaching is even clearer with respect to bent portion 2b as it is for linear portion 2a.

Though Kasuga discloses that linear frame portion 2a has a hexagonal cross-section in which ribs 11 diagonally connect the inner faces of the linear portion and pass through the center axis of the hollow, Kasuga omits any description of the structure of bent portion 2b. For example, the written description in Kasuga regarding benefits of its cross-sectional dimension appears to refer only to linear portion 2a (please see columns 3 and 4). No separate discussion is provided in Kasuga regarding bent portion 2b (only that it is a “bent portion”), let alone any teaching or suggestion that portion 2b is unitary.

Applicant further submits that no anticipatory inference regarding the structure of bent portion 2b can be made using the described structure of linear portion 2a, because

Figures 2 and 3 of Kasuga clearly show that portions 2a and 2b have different structures, for example, different cross-sections. No description is provided in Kasuga to explain this difference. Eichner also fails to show a unitary structural member having a curvilinear trajectory along its length.

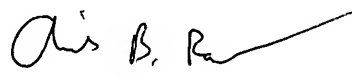
For at least these reasons, Applicant respectfully submits that new claim 39 and its dependent claim 40 are allowable over the references of record, including Kasuga and Eichner. Inasmuch as the current rejections are applied to new claims 39 and 40, Applicant respectfully traverses, and requests reconsideration and withdrawal of the rejection.

Applicant also submits new claims 41-45. Claim 41 defines, among other things, a plurality of outer portions being arched in cross-section so that corrugations are formed between web portions along an outer surface. Applicant respectfully submits that claims 41-45 are allowable, as the references do not appear to show or suggest a unitary structural member as defined, alone or in combination. Please see, for example, the outer surfaces shown in Kasuga and Eichner.

For at least the foregoing reasons, Applicant believes that this case is in condition for allowance, which is respectfully requested. The Examiner should call Applicants' attorney if an interview would expedite prosecution.

Respectfully submitted,

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